Work Order ID May-13-13 1:14:10 PN			*101	785*	. .		-			Page 1	_
tem ID: D3067 Revision ID: tem Name: End Pla	·	- · · · · · · · · · · · · · · · · · · ·	Accept	*N90	004	.010	n*	Setup Star	IV	S1* S2*	
Start Date: 5/13/13 Required Date: 5/31/13 Reference:	- ·	*200 *200		Cust Ite Custom							
	ess Plan: MC5	,			Date:			Run Star Stop	171	R1* R2*	
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool I	D To	ol# Plan Cod		Reject Qty	Reject Number	Insp. Stamp	_
Draw Nbr	Revision Nbr			ſ							
D3067	Rev A										_
*100 *100* Waterjet	FLOW WATER JET		0.00				742		213-	6-14	
FLOW CNC Waterjet	1-Cut as per Dwg Rev: Prog Rev: 2-Deburr if n	<u>F</u>									
110	QC2- Inspect parts off ma	ichine FAI/FAIB	0.00				D // 2	_	<i>9</i> /3	-6-14	
110 QC Quality Control	Memo		0.00			•	BY 2		. () 3	6 / 3	
¹²⁰ * 1 ク∩*	QC8- Inspect parts - seco	nd check	0.00				(21)) 13-	06.14	AS)	
QC	Memo		0.00							, e,	

Quality Control

										DQA:	Date	:
NCR: Y	es / No				WORK ORDER NON-C	ON	NFORM	MANCE / UPDATE		QA Closed:	Date	:
					DISPOSITION			AGAINST	DE	PARTMENT		
Work Orde	er:				<u> </u>	, I		a 🗖	_	7	\A/-4 1-4\	,
Part N	lo				Rework Scrap Use-as-is		ı	Skid-tube Crosstube Machining Small Fab noforming Finishing		4	Water Jet d. Eng. Coor. e/Packaging	Engineering Quality Other
NCR N	lo				Work Order Update			Large Fab Composite	· —]	Supplier	
Root				Descri	ption of work order update	- 1	nitial	Action		Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator												
Material												
Setup												ł
Other			ļ									
Process		1		:		1						
Supplier -	-											
Training						ļ						
Unapproved			<u> </u>			<u> </u>						
					. F/	AUL	T CATE	GORY .				
Landii	ng Gear			_	General		1		_	ז	_	¬
	Bending				Bend		Grain			Ovalized		Pressure/Forced
	Centre No	ot Conce	ntric to	o/s	BOM/Route		Hardwa		<u>_</u>	Over/Under	_	Temperature/Cure
*	Cracks		,	`	Broken/Damaged	_		on Incomplete	L	Part Incorrec	<u> </u>	Weld
	Crushed/	Crimped			Burrs	Ш	Instruct	ions Incomplete/Unclear		Part Lost/Mis	ssing	Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		Part Moved		
	Heat Trea	at .			Countersink	1 7	Mislahe	led	1	Positioned W	/rong	

Misread Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ordo <i>May-13-13 1:14</i>		1785		*101	785*		·				Page 2	
Item ID: Revision ID: Item Name:	D3067-1 End Plate			Accept	*N900)040 <i>°</i>	100	* S	etup Star	1 71	S1* S2*	
	5/13/13	Start Qty: 200.00 Req'd Qty: 200.00	*200 *200		Cust Item Customer				64			
Approvals:		n:	Date:	Tooling: SPC (Y/N):		Date:		K	un Stai Sto	, ''I V I	R1* R2*	
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours 0.00	Tool ID		Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	1
130 Brake NC Brake NC		NC BRAKE Memo Bend as per D	owg D3067	0.00			ż	242			18/06	/
140 *140* QC Quality Control	•	QC5- Inspect part completed Memo	teness to step on W/O	0.00 0.00 Shか 3 6	. 17			343				
150. *150*		Identify as per dwg & Stoo	ck Location: LMA, C	•			·	244	ø	·	K	

0.00

Memo

*** STOCK IN STEP CELL***

Packaging

Packaging

											DQA:	Date	:
NCR:	⁄es	/ No				WORK ORDER NON-C	100	NFORI	MANCE / UP	DATE			
•											QA Closed:	Date	•
Work Orde	sr.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
WOIK OIGE	=1.					Rework	i I		Skid-tube	Crosstube]	Water Jet	Engineering
Part N	No.			,		Scrap		1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
					· · · ·	Use-as-is		Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR I	۷o.					Work Order Update			Large Fab	Composite]	Supplier	
Root			<u> </u>	ľ	Descri	ption of work order update		Initial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	ł	ief Eng		ription	Date	Verification	QC Inspector
Doc/Data	П		 							•			
Equip/Tooling													
Operator													
Material											,		
Setup												,	
Other									<u> </u>				
Process						•	1						
Supplier					1		l					!	
Training]		:				
Unapproved													
						F.	AUL	T CATE	GORY	-			The state of the s
Landi	ng (Gear				General					٦	_	_
	_	Bending			L	Bend		Grain			Ovalized	<u> </u>	Pressure/Forced
	L	Centre No	ot Conce	ntric to	o/s	BOM/Route		Hardwa	ire		Over/Under	_	Temperature/Cure
		Cracks			<u> </u>	Broken/Damaged		4 `	ion Incomplete	<u> </u>	Part Incorre	├	Weld
	$oxed{oxed}$	Crushed/	Crimped			Burrs	L	Instruct	tions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	enance		Part Moved		
		Heat Trea	at '			Countersink		Mislabe	eled		Positioned V	Vrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

May-13-13 1:1	4:10 PM						or are electrical						
Item ID: Revision ID:	D3067-1			Accept	*N900	040	100)*	Setup	Start Stop		S1*	
Item Name:	End Plate										I.Z.	S2*	
Start Date:	5/13/13	Start Qty: 200.00	*200)*	Cust Item I	D:	•						
Required Date	: 5/31/13	Req'd Qty: 200.00	*200)*	Customer:							•	
Reference:	•												
Approvals:	Process Pl	lan:	Date:	Tooling:	Da	nte:			Run	Start	*N	R1*	
	QC:		Date:	_ SPC (Y/N):	Da	ate:				Stop	*N	R2*	
Sequence ID/ Work Center	ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Re Qt	•	Reject Number,	Insp. Stamp	
160		QC21- Final Inspection -	Work Order Release	0.00						12	1, 1,	$a \rightarrow k$	†
160 QC Quality Control		Мето		0.00						<u> 17</u> 1		7 70°	/ <

											DQA:	Dat	e:
NCR:	/es	/ No				WORK ORDER NON-C	100	NFORM	MANCE / UP	DATE			
											QA Closed:	Dat	e:
Work Orde	òr.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
WOIR OIGE	-					Rework	1		Skid-tube	Crosstube	1	Water Jet	Engineering
Part N	٧o.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	•			•		Use-as-is		Therm	noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR i	۱o. ₋					Work Order Update			Large Fab	Composite		Supplier	
Root					Descri	ption of work order update		nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling							ļ					i	
Operator													
Material											<u> </u>		
Setup												· i	·
Other													
Process		•					1						
Supplier												-	:
Training			1										ļ
Unapproved													
						F.	AUL	T CATE	GORY				
Landi	ng G	iear				General	_			_	,	-	
	Ш	Bending			L	Bend		Grain			Ovalized	L	Pressure/Forced
		Centre No	ot Conce	ntric to	o/s	BOM/Route	oxdot	Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks			<u> </u>	Broken/Damaged	L	Inspecti	on Incomplete		Part Incorred	ct _	Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved		·
		Heat Trea	it			Countersink		Mislabe	led		Positioned V	Vrong _	
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	1		Power Loss/	Surge	Other
		Ripples in	Bend			Drill Holes		Offset					

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

May-13-13 1:14:10 PM

Work Order ID:

101785

Parent Item:

D3067-1

Parent Item Name:

End Plate

Start Date: 5/13/13

Required Date: 5/31/13

Start Qty: 200.00

Required Qty: 200.00

Comments:

IPP: 03.01.21 Remove step 6 (Deburr)

IPP Rev:B Now on Water jet 06-06-16 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M5052H32S.063 5052-H32 .063 Sheet		Purchased	No			100	sf	190.1453	0.0625	13.1579	13-	6-14	
				Location		Loc Qty	<u>Lo</u>	c Code					
				MAT022		190.145264							

MAT022 190.145264 114322 25.705264 120603 18.5 121901 19.34 125272 126.6

141 253

NCR: Y	·													
											QA Closed:	Da	te:	
Work Orde	er:					DISPOSITION			,	AGAINST DE	PARTMENT	/PROCESS		
Part N	-					Rework Scrap Use-as-is Work Order Update		Thern	Machining S noforming	rosstube Small Fab Finishing omposite	1	Water Jet d. Eng. Coor. e/Packaging Supplier		Engineering Quality Other
Root					Descri	ption of work order update	П	Initial	Action	-	Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Description	on	Date	Verificatio	n ·	QC Inspector
Doc/Data			Ī											
Equip/Tooling														
Operator		:												
Material														
Setup			i.		٠.									
Other														
Process							1						ł	
Supplier														
Training														
Unapproved			l	<u> </u>	<u> </u>									
							AUI	LT CATE	GORY					
Landi						General		7			1		$\overline{}$	
		Bending			·.	Bend	\vdash	Grain		-	Ovalized		\vdash	Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route	\vdash	Hardwa			Over/Under		-	Temperature/Cure
	-	Cracks			-	Broken/Damaged	-	4	on Incomplete	<u> </u>	Part incorred		-	Weld
	-	Crushed/	Crimped		<u> </u>	Burrs	-	4	ions Incomplete/Uncle	ear	Part Lost/Mi	ssing	Ш	Wrong Stock Pulled
	\vdash	Cuffs			<u> -</u>	Contamination		Mainte		<u> </u>	Part Moved			
	\vdash	Heat Trea			<u> </u>	Countersink	\vdash	Mislabe		<u> </u>	Positioned V	_		
		Inspectio	-	Tube	$oxedsymbol{oxed}$	Cut Too Short	_	Misread	j		Power Loss/	Surge	Ш	Other
		Ripples in			oxdapsilon	Drill Holes	_	Offset						
		Torque W	/aves in E	Extrusio	n	Drawing		Out of 0	Calibration					

Out of Sequence

Outside Dimensions

Date:

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	101785
Description: End Plate	Part Number:	D3067-1
Inspection Dwg: D3067 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article	Prototype
-----------------	-----------

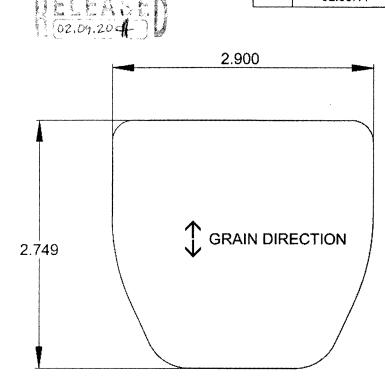
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.900	+/-0.010	2-905	v		VJKMOJ	
2.749	+/-0.010	2-749				
				····		
					-	
· · · · · · · · · · · · · · · · · · ·			-			
						11.4.5
·						
			-			
N						
			·	-		
				 		
						· · · · · · · · · · · · · · · · · · ·
	 	,				
				,		
				-		
			DAS		·	

Measured by:	a	Audited by:	9-69	Prototype Approval:	N/A
Date:	13-6-13	Date:	1306.14	Date:	N/A

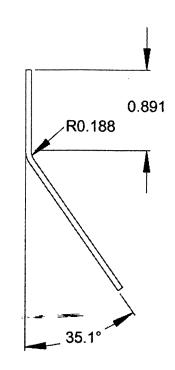
Rev	Date	Change	Revised by	Approved
Α	03.10.07	New Issue	KJ/RF	14



DESIGN DRAWN BY		DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECK	界	APPROVED	D3067	REV. A SHEET 1 OF 1	
02.09.11			END PLATE	SCALE 1:1	
Α	0	2.09.11	NEW ISSUE		



D3067-1 FLAT PATTERN



D3067-1 BEND DETAIL

D3067-1 END PLATE

1) MACHINE PER DWG FILE "D3067-1.SLDPRT"

2) MATERIAL: 5052-H32 PER QQ-A-250/8 (REF DART SPEC. M5052H32S.063) OR 6061-T6 PER QQ-A-250/11 (REF DART SPEC. M6061T6S.063) ALUMINUM SHEET, 0.063 THICK

3) FINISH: NONE 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

5) ALL DIMENSIONS ARE IN INCHES

COPYRIGHT ©2002 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.